Community Banking
in the 21st Century

# The Effect of Distance on Community Bank Performance Following Acquisitions and Consolidations

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# Acquisitions vs. Consolidations

- A *merger* occurs when two or more community bank charters are combined.
- A *consolidation* occurs when the merger banks in a given transaction are part of the same BHC for at least one year prior to the merger.
- Any other merger is an *acquisition*.
- The *acquirer* is the surviving charter, and the *target* is the non-surviving charter.

# Research questions

- What effect does distance between acquirer and target have on community bank performance?
- What effect does distance have on community bank consolidations?
- Supervisors and bankers should care about the answers to these questions to guide their policies and decision making.

# Potential impact of distance on post-acquisition performance

- Benefits from increased distance
  - Geographic risk diversification
  - Growth opportunities for banks in slow-growth markets
- Costs from increased distance
  - Increased managerial costs
  - Increased monitoring costs
  - More difficulty in transferring soft information
  - Smaller increase in market power

# Potential impact of distance on post-consolidation performance

- Benefits from consolidation
  - Greater control over the bank by lead bank or BHC.
    - A board and senior management layers are removed.
  - Potentially lower labor costs
- Impact from distance?
  - A long-distance consolidation would increase post-consolidation performance only to the extent that a more horizontal management structure is a more efficient way to monitor and manage a distant branch more efficiently.

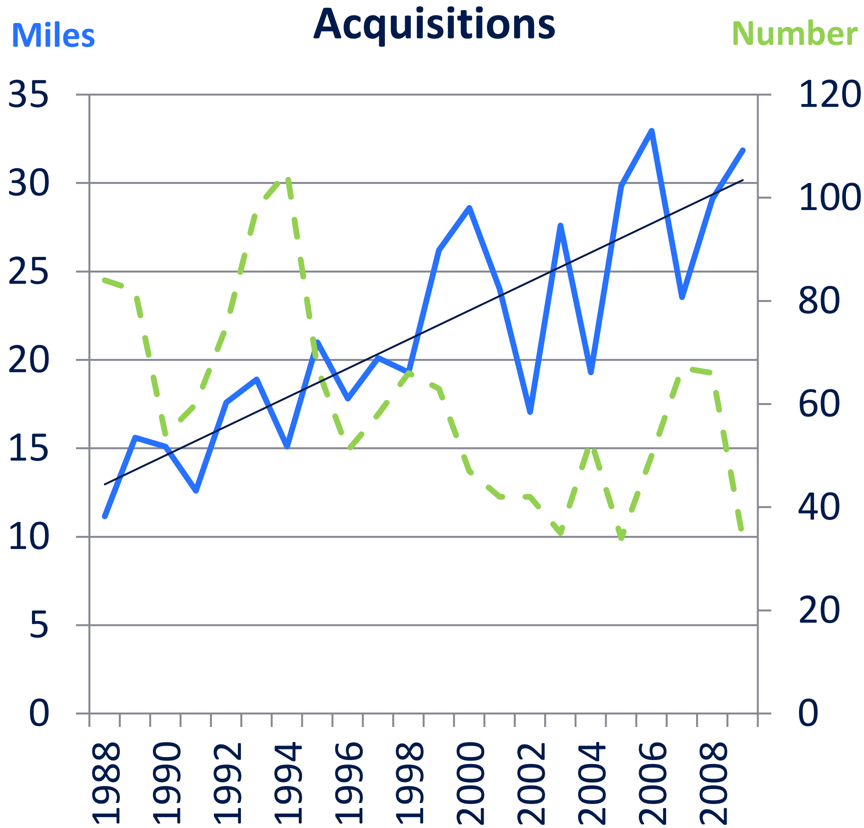
# Previous research findings

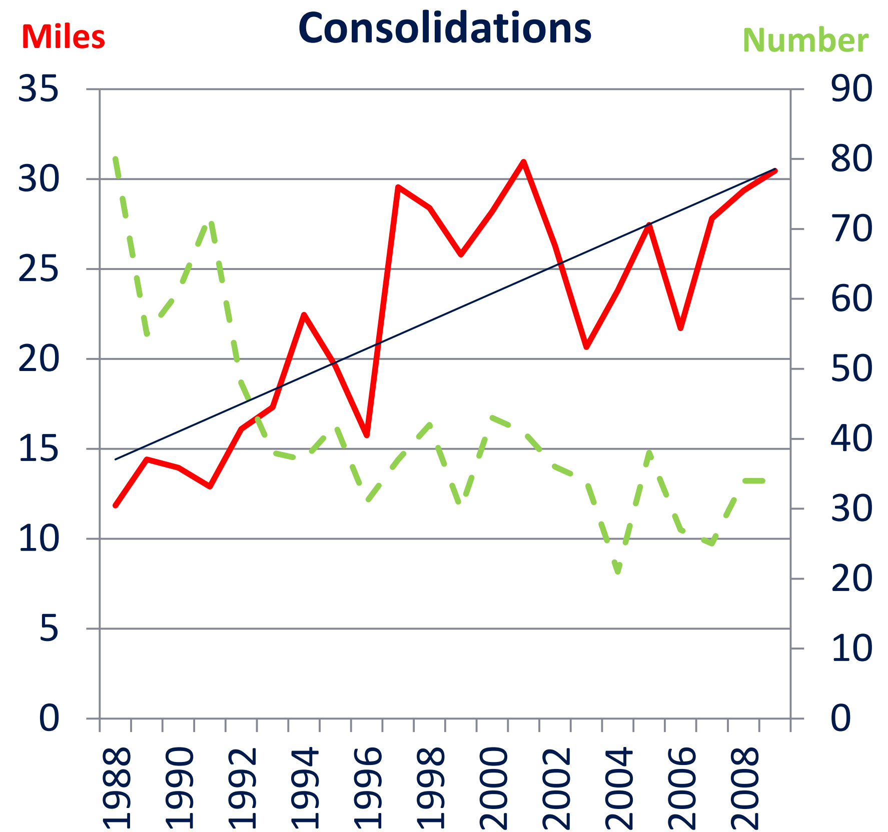
- In general, most studies find that distance harms performance.
- Studies have also found that the harmful effects of distance have diminished through time due to technological progress in communication and information processing.

# Bank sample

- We examine all U.S. community bank mergers between 1988 and 2009 where:
  - Total assets of each merger entity was less than $1 billion in inflation-adjusted assets.
  - Acquirer had no other mergers four quarters prior to, and 12 quarter after the merger event.
  - Acquirer survived at least 8 quarters after the merger quarter.
- 1,333 acquisitions; 906 consolidations

# Merger partners are nearby but distance has increased through time



# Bank performance measures

- Performance is the mean post-merger ratio (*t+1* to *t+12*) minus the asset-weighted mean pre-merger ratio (*t-4* to *t-1*).
- Each ratio in each quarter is adjusted by the median community bank ratio.
- We track 9 ratios: four income, two expense, and three risk measures.

# Summary Statistics

| Industry-adjusted ratio | Acquisitions | | | Consolidations | | |
|---|---|---|---|---|---|---|
| | Pre-merger | Post-merger | Difference | Pre-merger | Post-merger | Difference |
| Operating income (%) | -0.04 | 0.02 | 0.06 | 0.01 | 0.03 | 0.02 |
| ROE (%) | 0.13 | 0.61 | 0.48 | 1.29 | 1.48 | 0.19 |
| Net int income (%) | 0.03 | 0.05 | 0.01 | 0.05 | 0.04 | -0.01 |
| Nonint income (%) | 0.22 | 0.23 | 0.01 | 0.29 | 0.26 | -0.03 |
| Efficiency ratio (%) | 1.40 | 0.16 | -1.24 | 0.57 | -0.35 | -0.92 |
| Nonint expense (%) | 0.25 | 0.15 | -0.09 | 0.26 | 0.12 | -0.14 |
| Std ROE (%) | 1.71 | 1.80 | 0.09 | 1.66 | 3.25 | 1.58 |
| Nonperf loans (%) | 0.25 | 0.30 | 0.05 | 0.31 | 0.33 | 0.02 |
| Chargeoffs (%) | 0.14 | 0.17 | 0.03 | 0.18 | 0.19 | 0.01 |

# Full sample multivariate results

| Ratio | Marginal change in bank performance for | |
|---|---|---|
| | Acquisition > 100 km | Consolidation > 100 km |
| Operating income (%) | -0.13** | 0.10* |
| ROE (%) | -1.25*** | 0.20 |
| Net interest income (%) | 0.00 | 0.07* |
| Noninterest income (%) | -0.01 | -0.00 |
| Efficiency ratio (%) | 1.29* | -0.97 |
| Noninterest expense (%) | 0.05 | 0.00 |
| Std ROE (%) | 1.07*** | 0.46 |
| Nonperforming loans (%) | 0.14** | 0.06 |
| Chargeoffs (%) | 0.07*** | 0.01 |

# Is post-merger performance worse during periods of distress?

- Strategy
  - Examine marginal change in performance for banks that merged in 2005-2007, just before community bank performance deteriorated in 2008.
  - Also examine marginal change in performance for banks that merged in 2005-2007, and the merger was greater than 100 km.

# Crisis period multivariate results

| | Marginal change in bank performance for | | | |
|---|---|---|---|---|
| | Pre-crisis Acquisitions | | Pre-crisis Consolidations | |
| Ratio | All | > 100km | All | > 100km |
| Operating income (%) | -0.10 | -0.07 | -0.14 | -0.01 |
| ROE (%) | -1.20** | -1.39 | -1.19 | -0.35 |
| Net interest income (%) | -0.02 | -0.07 | -0.05 | -0.01 |
| Noninterest income (%) | -0.05** | 0.09 | -0.02 | 0.02 |
| Efficiency ratio (%) | -0.56 | -0.57 | -0.50 | -0.72 |
| Noninterest expense (%) | -0.08** | 0.01 | -0.08** | 0.03 |
| Std ROE (%) | 0.03 | 0.14 | 0.32 | 0.09 |
| Nonperforming loans (%) | 0.10 | 0.18 | 0.30*** | 0.08 |
| Chargeoffs (%) | 0.08*** | 0.09 | 0.13*** | -0.10 |

# Conclusion

- Long-distance acquisitions are less profitable and riskier in the first three post-merger years relative to nearby acquisitions.
- Distant acquisitions just before periods of banking distress also perform worse but the difference is not statistically significant.
- Distance has little effect on post-consolidation bank performance. And there is no clear trend in performance for distant consolidations in the pre-crisis period.

# Improvements to come…

- Check for endogeneity – mergers are not random events.
- Focus on recessionary periods as well as the crisis years.
- Examine distance as a continuous and potentially nonlinear variable.
- Check for the stability of the coefficients over time.